We claim:

1. A system for detecting gene expression comprising at least two isolated DNA molecules wherein each isolated DNA molecule detects expression of a gene wherein said gene is selected from the group of genes corresponding to the oligonucleotides depicted in SEQ ID NO:1 - SEQ ID NO: 8143.

2. The system of claim 1 wherein said gene is selected from the group of genes corresponding to the oligonucleotides depicted in SEQ ID NO:2476, SEQ ID NO: 2407, SEQ ID NO:2192, SEQ ID NO: 2283, SEQ ID NO:6025, SEQ ID NO: 4481, SEQ ID NO:3761, SEQ ID NO: 3791, SEQ ID NO:4476, SEQ ID NO: 4398, SEQ ID NO:7401, SEQ ID NO: 1796, SEQ ID NO:4423, SEQ ID NO: 4429, SEQ ID NO:4430, SEQ ID NO: 4767, SEQ ID NO:4829, and SEQ ID NO: 8091.

3. The system of claim 1 wherein the DNA molecules are synthetic DNA, genomic DNA, PNA or cDNA.

4. The system of claim 1 wherein the isolated DNA molecules are immobilized on an array.

5. The system of claim 4 wherein the array is selected from the group consisting of a chip array, a plate array, a bead array, a pin array, a membrane array, a solid surface array, a liquid array, an oligonucleotide array, polynucleotide array or a cDNA array, a microtiter plate, a membrane and a chip.

6. A method of detecting gene expression comprising a) isolating RNA and b) hybridizing said RNA to the isolated DNA molecules of claim 1.

7. A method of detecting gene expression comprising a) isolating RNA; b) converting said RNA to nucleic acid derived from the RNA and c) hybridizing said nucleic acid derived from the RNA to the isolated DNA molecules of claim 1.

8. The method of claim 7 wherein said nucleic acid derived from the RNA is cDNA.

9. A method of detecting gene expression comprising a) isolating RNA; b) converting said RNA to cRNA or aRNA and c) hybridizing said cRNA or aRNA to the isolated DNA molecules of claim 1.

10. A candidate library comprising at least two isolated oligonucleotides wherein the oligonucleotides have nucleotide sequences having at least 40-50, 50-60, 70-80, 80-85, 85-90, 90-95 or 95-100% sequence identity to the nucleotide sequences selected from the group consisisting of SEQ ID NO:1- SEQ ID NO: 8143.

11. The candidate library of claim 10, wherein the nucleotide sequence comprises deoxyribonucleic acid (DNA) sequence, ribonucleic acid (RNA) sequence, synthetic oligonucleotide sequence, protein nucleic acid (PNA) sequence or genomic DNA sequence.

12. The candidate library of claim 11, wherein the candidate library is immobilized on an array.

13. The candidate library of claim 12, wherein the array is selected from the group consisting of: a chip array, a plate array, a bead array, a pin array, a membrane array, a solid surface array, a liquid array, an oligonucleotide array, polynucleotide array or a cDNA array, a microtiter plate, a membrane and a chip.

14. A diagnostic oligonucleotide for a disease comprising an oligonucleotide wherein the oligonucleotide has a nucleotide sequence selected from the group consisting of SEQ ID NO:1 - SEQ ID NO: 8143 wherein said oligonucleotide detects expression of a gene that is differentially expressed in leukocytes in an individual with at least one disease criterion for at least one leukocyte-related disease compared to the expression of said gene in an individual without the at least one disease criterion, wherein expression of the gene is correlated with the at least one disease criterion.

15. The diagnostic oligonucleotide of claim 14, wherein the nucleotide sequence comprises DNA, cDNA, PNA, genomic DNA, or synthetic oligonucleotides.

16. The diagnostic oligonucleotide of claim 14, wherein the disease criterion comprises data wherein the data is selected from physical examination data, laboratory data, patient historic, diagnostic, prognostic, risk prediction, therapeutic progress, and therapeutic outcome data.

17. The diagnostic oligonucleotide of claim 14, wherein the leukocytes comprise peripheral blood leukocytes or leukocytes derived from a non-blood fluid.

18. The diagnostic oligonucleotide of claim 17, wherein the non-blood fluid is isolated from the colon, sinus, esophagus, small bowel, pancreatic duct, biliary tree, ureter, vagina, cervix uterus, nose, ear, urethra, eye, open wound, abscess, stomach, cerebral spinal fluid, peritoneal fluid, pleural fluid, synovial fluid, bone marrow and pulmonary lavage.

19. The diagnostic oligonucleotide of claim 14, wherein the leukocytes comprise leukocytes derived from urine or a biopsy sample.

20. The diagnostic oligonucleotide of claim 14, wherein the leukocytes are peripheral blood mononuclear cells or T-lymphocytes.

21. The diagnostic oligonucleotide of claim 14, wherein the disease is selected from the group consisting of cardiac allograft rejection, kidney allograft rejection, liver allograft rejection, atherosclerosis, congestive heart failure, systemic lupus erythematosis (SLE), rheumatoid arthritis, osteoarthritis, and cytomegalovirus infection.

22. The diagnostic oligonucleotide of claim 14, wherein the differential expression is one or more of: a relative increase in expression, a relative decrease in expression, presence of expression or absence of expression.

23. A diagnostic agent comprising an oligonucleotide wherein the oligonucleotide has a nucleotide sequence selected from the group consisting of SEQ ID NO:1 - SEQ ID NO: 8143 wherein said oligonucleotide detects expression of a gene that is differentially expressed in leukocytes in an individual over time.

24. The agent of claim 23 wherein said oligonucleotide is selected from the group consisting of SEQ ID NO:2476, SEQ ID NO: 2407, SEQ ID NO:2192, SEQ ID NO:2283, SEQ ID NO:6025, SEQ ID NO:4481, SEQ ID NO:3761, SEQ ID NO:3791, SEQ ID NO:4476, SEQ ID NO:4398, SEQ ID NO:7401, SEQ ID NO: 1796, SEQ ID NO:4423, SEQ ID NO:4429, SEQ ID NO:4430, SEQ ID NO:4767, SEQ ID NO:4829, and SEQ ID NO:8091.

25. A diagnostic probe set for a disease comprising at least two probes wherein each probe detects expression of a gene wherein the gene is selected from the group of genes corresponding to the oligonucleotides depicted in SEQ ID NO: 1 - SEQ ID NO:8143 wherein each gene is differentially expressed in leukocytes in an individual with at least one disease criterion for a disease selected from Table 1 as compared to the expression of the gene in leukocytes in an individual without the at least one disease criterion, wherein expression of the gene is correlated with the at least one disease criterion.

26. An isolated nucleic acid wherein said nucleic acid comprises a sequence depicted in SEQ ID NO:8144 - SEQ ID NO:8766.

27. An expression vector containing the nucleic acid of claim 26 in operative association with a regulatory element which controls expression of the nucleic acid in a host cell.

28. A host cell comprising the expression vector of claim 27.

29. The host cell of claim 27, wherein the host cell is a prokaryotic cell or a eukaryotic cell.

30. A kit comprising the system of claim 1.

31. A system for detecting gene expression in leukocytes comprising an isolated DNA molecule wherein said isolated DNA molecule detects expression of a gene wherein said gene is selected from the group of genes corresponding to the oligonucleotides depicted in SEQ ID NO: 1-SEQ ID NO: 8143 and said gene is differentially expressed in said leukocytes in an individual with at least one disease criterion for a disease selected from Table 1 compared to the expression of said gene in leukocytes in an individual without the at least one disease criterion.

32. The system of claim 31 wherein the DNA molecule is at least 16 nucleotides in length.

33. The system of claim 31 wherein the DNA molecules are synthetic DNA, genomic DNA, PNA or cDNA.

34. The system of claim 31 wherein the isolated DNA molecule is immobilized on an array.

35. The system of claim 34 wherein the array is selected from the group consisting of a chip array, a plate array, a bead array, a pin array, a membrane array, a solid surface array, a liquid array, an oligonucleotide array, polynucleotide array or a cDNA array, a microtiter plate, a membrane and a chip.

36. A method of detecting gene expression comprising a) isolating RNA and b) hybridizing said RNA to the isolated DNA molecule of claim 31.

37. A method of detecting gene expression comprising a) isolating RNA; b) converting said RNA to nucleic acid derived from the RNA and c) hybridizing said nucleic acid derived from said RNA to the isolated DNA molecules of claim 31.

38. The method of claim 37 wherein said nucleic acid derived from the RNA is cDNA.

39. A method of detecting gene expression comprising a) isolating RNA; b) converting said RNA to cRNA or aRNA and c) hybridizing said cRNA or aRNA to the isolated DNA molecule of claim 31.

40. A method of diagnosing a disease comprising obtaining a leukocyte sample from an individual, contacting said leukocyte sample with the gene expression system of claim 31 and comparing the expression of the gene with a molecular signature indicative of the presence or absence of said disease.

41. A method of monitoring progression of a disease comprising: obtaining a leukocyte sample from an individual, contacting said leukocyte sample with the gene expression system of claim 31, and comparing the expression of the gene with a molecular signature indicative of the presence or absence of disease progression.

42. A method of monitoring the rate of progression of a disease comprising: obtaining a leukocyte sample from an individual, contacting said leukocyte sample with the gene expression system of claim 31, and comparing the expression of the gene with a molecular signature indicative of the presence or absence of disease progression.

43. A method of predicting therapeutic outcome comprising: obtaining a leukocyte sample from an individual, contacting said leukocyte sample with the gene expression system of claim 31, and comparing the expression of the gene with a molecular signature indicative of the predicted therapeutic outcome.

44. A method of determining prognosis for a patient comprising obtaining a leukocyte sample from a patient, contacting said leukocyte sample with the gene expression system of claim 31, and comparing the expression of the gene, and comparing the expression of the gene with a molecular signature indicative of the prognosis.

45. A method of predicting disease complications in an individual comprising obtaining a leukocyte sample from an individual, contacting said leukocyte sample with the gene expression system of claim 31, and comparing the expression of the gene with a molecular signature indicative of the presence or absence of disease complications.

46. A method of monitoring response to treatment in an individual, comprising obtaining a leukocyte sample from an individual, contacting said leukocyte sample with the gene expression system of claim 31, and comparing the expression of the gene with a molecular signature indicative of the presence or absence of response to treatment.

47. The method according to claim 46, wherein said method further comprises characterizing the genotype of the individual, and comparing the genotype of the individual with a diagnostic genotype, wherein the diagnostic genotype is correlated with at least one disease criterion.

48. The method according to claim 41, wherein said method further comprises characterizing the genotype of the individual, and comparing the genotype of the individual with a diagnostic genotype, wherein the diagnostic genotype is correlated with at least one disease criterion.

49. The method according to claim 42, wherein said method further comprises characterizing the genotype of the individual, and comparing the genotype of the individual with a diagnostic genotype, wherein the diagnostic genotype is correlated with at least one disease criterion.

50. The method according to claim 43, wherein said method further comprises characterizing the genotype of the individual, and comparing the genotype of the individual with a diagnostic genotype, wherein the diagnostic genotype is correlated with at least one disease criterion.

51. The method according to claim 44, wherein said method further comprises characterizing the genotype of the individual, and comparing the genotype of the individual with a diagnostic genotype, wherein the diagnostic genotype is correlated with at least one disease criterion.

52. The method of claim 50, wherein the genotype is analyzed by one or more methods selected from the group consisting of Southern analysis, RFLP analysis, PCR, single stranded conformation polymorphism, and SNP analysis.

53. A method of RNA preparation suitable for diagnostic expression profiling comprising: obtaining a leukocyte sample from a subject, adding actinomycin-D to a final concentraion of 1 ug/ml, adding cycloheximide to a final concentration of 10 ug/ml, and extracting RNA from the leukocyte sample.

54. The method of claim 52, wherein the actinomycin-D and cycloheximide are present in a sample tube to which the leukocyte sample is added.